

**Patent Claims**

1. A method for motion estimation in a digitized image having pixels,
- 5 - in which the pixels are grouped in picture blocks,
- in which the pixels are grouped to form at least one first picture area and one second picture area,
- 10 - in which first motion estimation is carried out in a first search area for at least one first picture block in the first picture area in order to determine a first motion vector by means of which a movement of the first picture block is described in comparison to the first picture block in a preceding predecessor picture and/or in comparison to the first picture block in a subsequent successor picture,
- 15 - in which second motion estimation is carried out in a second search area for at least one second picture block in the second search area in order to determine a second motion vector by means of which a movement of the second picture block is described in comparison to the second picture block in a preceding predecessor picture and/or in comparison to the second picture block in a subsequent successor picture,
- 20 - in which the first search area and the second search area are of different sizes, and
- 25 - in which the size of the first search area and/or of the second search area is varied as a function of a predetermined picture quality, by means of which the first picture block and/or the second picture block are/is coded.
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- 35 2. The method as claimed in claim 1,

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- characterized in that the size of the first search area and/or of the second search area are/is varied as a function of a quantization parameter by means of which the first picture block and/or the second picture block are/is quantized.
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3. The method as claimed in one of claims 1 to 2, used for coding the digitized picture.
- 10 4. The method as claimed in claim 3,  
- in which variable length coding of the motion vectors is carried out,  
- in which a number of stored, different tables, in which codes for variable length coding are stored, are used for variable length coding.
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5. The method as claimed in claim 4,  
characterized in that the tables are matched to the maximum length of the motion vectors.
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6. An arrangement for motion estimation in a digitized picture having pixels,  
having a processor which is set up such that the following steps can be carried out:  
- the pixels are grouped into picture blocks,  
- the pixels are grouped to form at least one first picture area and one second picture area,  
- first motion estimation is carried out in a first search area for at least one first picture block in the first picture area in order to determine a first motion vector by means of which a movement of the first picture block is described in comparison to the first picture block in a preceding predecessor picture and/or in comparison to the first picture block in a subsequent successor picture,
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- second motion estimation is carried out in a second search area for at least one second picture block in the second picture area in order to determine a second motion vector by means of which a movement of the second picture block is described in comparison to the second picture block in a preceding predecessor picture and/or in comparison to the second picture block in a subsequent successor picture,
- 5 - the first search area and the second search area are of different sizes, and
- 10 - wherein the processor is set up such that the size of the first search area and/or of the second search area are/is varied as a function of a predetermined picture quality by means of which the first picture block and/or the second picture block are/is coded.
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7. The arrangement as claimed in claim 6,  
20 wherein the processor is set up such that the size of the first search area and/or of the second search area are/is varied as a function of a quantization parameter by means of which the first picture block and/or the second picture block are/is quantized.
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8. The arrangement as claimed in one of claims 6 or 7, used in a picture coding device.
- 30 9. The arrangement as claimed in one of claims 6 or 7, used in a picture coding device,  
wherein the processor is set up such that  
- variable length coding of the motion vectors is carried out,

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- a number of stored, different tables, in which codes for variable length coding are stored, are used for variable length coding.

- 5 10. The arrangement as claimed in claim 9,  
characterized in that the processor is set up such  
that the tables are matched to the maximum length  
of the motion vectors.

AMENDMENT